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September 27, 2013

VIA EMAIL: KOLENBERG.BEVERLY@EPA.GOV
AND OVERNIGHT DELIVERY

Beverly Kolenberg, Asst. Regional Counsel
Office of Regional Counsel
US Environmental Protection Agency
290 Broadway, 17th Floor
New York, New York 10007-1866

Re: New Cassel/Hicksville Groundwater Contamination Superfund Site
CERCLA 104(e) Requests for Information
Our File No. 7507-5

Dear Ms. Kolenberg:

As you know, the undersigned represents Vishay GSI, Inc. In accordance with the agreement we reached with your office on August 19, 2013, enclosed herein please find the response of Vishay, GSI, Inc. to the United States Environmental Protection Agency's ("USEPA") request for information pursuant to Section 104(e) of the Comprehensive Environmental Response and Compensation Liability Act ("CERCLA"). Please note that the documents referenced in the response will be provided under separate cover in electronic format, as was requested by USEPA. We anticipate that the electronic documents will be available for submission on or before October 4, 2013.

While a good faith effort has been made by Vishay GSI, Inc. to respond to the CERCLA 104(e) request for information, please be advised that with the exception of the current and immediate past corporate form and the more recent environmental remediation efforts, neither Vishay GSI, Inc., nor any its officers, directors or employees, have any first-hand knowledge of the information set forth in the responses enclosed herewith. This is because manufacturing operations at the former General Instruments Corporation ("GIC") site located at 600 West John Street, Hicksville, New York ceased more than twenty (20) years ago, and Vishay GSI, Inc. neither owned nor conducted any operations at the former GIC site.

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In addition, Vishay GSI, Inc. did not become associated with the former GIC Site until approximately December 2003, nearly a decade after operations at the site ceased. Given these simple facts, the responses set forth herein that relate to information or events that occurred prior to Vishay GSI's knowledge of the site have been derived from a review of available documents.

During the review of the documentary record, it became evident that certain documents discussed proprietary blends of otherwise available chemical compounds that were used in the manufacturing process. These chemical blends, and the ratios in which they have been identified in the various reports that will be produced to USEPA, are proprietary information. Documents containing such information will be marked "Confidential" and shall be exempt from production under the Freedom of Information Act ("FOIA"). *See* 5 U.S.C. § 552(b)(4) (concerning commercial and financial information of a privileged or confidential nature).

Similarly, and though it has not received the same attention as some of the other FOIA exemptions (in particular Exemption 4); Exemption 9 has been construed broadly to apply to groundwater wells. *See Starkey v. U.S. Dep't of the* Interior, 238 F.Supp.2d 1188, 1196 (S.D. Cal. 2002)(affirming action of agency in withholding portions of preliminary draft supplemental environmental assessment related to groundwater tables and wells). Further, Exemption 9 has been construed to protect not only well data itself, but also information and documentation relating to or derived from such data. *See Superior Oil Co. v. F.E.R.C.*, 563 F.2d 191, 197, 203-04 (5th Cir. 1977); *see also National Broadcasting Co.* v. *U.S. Small Business Administration*, 836 F.Supp. 121 (S.D.N.Y. 1993)(noting withdrawal and non-production of complete memorandum on the grounds that it contained information falling within exemption). As such certain documents related to groundwater well information to be produced by Vishay GSI, Inc. will also be marked as "Confidential" and shall be exempt from production pursuant to FOIA. *See* 5 U.S.C. § 552(b)(9).

Please be further advised that while every effort has been made to respond completely and thoroughly to each specific request for information, and to identify documents, if any, that support each response, the specific and detailed nature of the requests, coupled with the limited timeframe provided by USEPA to respond, made the task unusually difficult. Nevertheless, Vishay GSI, Inc. continues its inquiry, and will supplement its responses as new or different information becomes available.

Respectfully submitted,

Todd M. Hooker

TMH/alb
Enclosures
cc. Jennifer LaPoma, Remedial Project Manager,
via email and first class mail w/enclosures

VISHAY GSI, INC.'S RESPONSE TO EPA REQUEST FOR INFORMATION REGARDING THE NEW CASSEL/HICKSVILLE SITE

1. a. State the correct legal name and mailing address of your Company.

Vishay GSI, Inc., 150 Motor Parkway, Hauppauge, New York.

b. State the name(s) and address(es) of the President, Chief Executive Officer and the Chairman of the Board (or other presiding officer) of the Company.

The President of Vishay GSI, Inc. is Carl Fritz and he may be contacted through counsel at the following address, Vishay GSI, Inc., c/o Laddey, Clark & Ryan, LLP, 60 Blue Heron Rd., Sparta, NJ 07871.

The directors of Vishay GSI, Inc. are as follows:

- Dr. Gerald Paul – Director
- Peter G. Henrici – Director
- David L. Tomlinson – Director

The directors of Vishay GSI, Inc., may be contacted through counsel at the following address, Vishay GSI, Inc., c/o Laddey, Clark & Ryan, LLP, 60 Blue Heron Rd., Sparta, NJ 07871.

c. Identify the state and date of incorporation of the Company and the Company's agents for service of process in the state of incorporation, and in New York State.

Vishay GSI, Inc. was incorporated in the State of Delaware on December 30, 2003. The Company's agent for service of process in both Delaware and New York is the Corporation Service Company, 2711

Centerville Road, Suite 4000, Wilmington, DE 19808, and 80 State Street, Albany, New York, 12207-2543, respectively.

d. If your Company is a subsidiary or affiliate of another corporation or entity, identify each of those corporations or entities and for each, the President, Chief Executive Officer and Chairman of the Board. Identify the state of incorporation and agents for service of process in the state of incorporation and in New York State for each corporation identified in your response to this question.

Vishay GSI, Inc. is a wholly owned subsidiary of Vishay Intertechnology, Inc., a Delaware corporation, whose agent for service of process in both Delaware and New York is also the Corporation Service Company. The Chief Executive Officer and President of Vishay Intertechnology, Inc. is Dr. Gerald Paul. The Executive Chairman of the Board of Vishay Intertechnology, Inc. is Marc Zandman.

e. If your Company is a successor to or has been preceded by another entity, identify such other entity and provide the same information as requested in 1.d., above.

The current officers and directors of Vishay GSI, Inc. lack any first-hand knowledge regarding many of the Company's preceding corporate entities; however, based upon a review of the available documentary record, it appears as though the publicly traded corporation known as General Instrument Corporation ("GIC"), owned and operated numerous facilities in the United States for many years. One such facility was located at 600 West John Street, Hicksville, Long Island, New York (the "GIC Hicksville Facility"). The original lessee of the GIC Hicksville Facility was a company known as General Transistor Corp., which had entered into a long-term lease in 1959

for the construction and operation of a manufacturing facility. Operations began at the GIC Hicksville Facility in late 1960, and either just before or shortly thereafter, General Transistor Corp. was merged into GIC. **(Tab 1)**

In August 1990, GIC was acquired by a wholly owned subsidiary of Forstmann Little & Company, a New York investment banking house. In August 1991, one of the divisions that operated at the GIC Hicksville Facility was sold to the Litton Applied Technology Division of San Jose, CA. Pursuant to a public offering in or around June 1992, GIC again became a publicly traded company. GIC continued at all relevant times during the Forstmann Little & Company acquisition to do business as either "General Instrument Corporation" or "GI Corporation." (*See* **Tab 2**)

On or about July 25, 1997, GIC restructured itself into three separate companies: (a) the Communications Business, which became NextLevel Systems, Inc. ("NextLevel Systems"); (b) the Cable Manufacturing Business, which became CommScope, Inc. ("CommScope"); and (c) the Power Semiconductor Business, which remained, temporarily as GIC. To affect this restructuring, GIC incorporated NextLevel Systems and CommScope as separate subsidiaries and allocated the assets and liabilities relating to the Communications Business to NextLevel Systems and the assets and liabilities relating to the Cable Manufacturing Business to CommScope. The assets and liabilities relating to the Power Semiconductor business, including those arising from the GIC Hicksville Facility, remained with GIC.

Following the incorporation of NextLevel Systems and CommScope,

GIC distributed all of the shares of common stock in the two companies to the shareholders of GIC as a result of which, each of the companies, GIC, NextLevel Systems and CommScope became separate and independent publicly traded companies. Following the restructuring, GIC abandoned the General Instrument Corporation name and changed its name to General Semiconductor, Inc. ("GSI"). It continued to conduct the Power Semiconductor Business.

After operating for a period of time, and upon information and belief, NextLevel Systems changed its name to General Instrument Corporation ("New GIC"). New GIC had no corporate or other relationship with GSI, other than the corporate history related above and the fact that New GIC uses (or used) the same name that GSI once held. **(Tab 3)**

In 1997, GSI sold the GIC Hicksville Facility to First Industrial, L.P. **(Tab 4)** Thereafter, First Industrial, L.P. sold the GIC Hicksville Facility to 600 West John LLC. Upon information and belief, 600 West John LLC is the current owner of the Hicksville Facility. **(Tab 5)** VGSI is not affiliated in any way with First Industrial, L.P., or 600 West John, LLC.

In November 2001, Vishay Acquisition Corp., a wholly owned subsidiary of Vishay Intertechnology, Inc., purchased all of the outstanding common stock of GSI. **(Tab 6)**

In 2003, GSI was reorganized and changed its business form to an LLC, and became Vishay General Semiconductor, LLC. **(Tab 7)** In 2004, certain of the assets and liabilities of Vishay General Semiconductor, LLC (including any

liability for the GIC Hicksville Facility) were distributed to its then parent, Vishay GSI, Inc., ("VGSI").

2. Identify the address, Section, Block and Lot numbers, and the size of each property (hereinafter, "Property" or "Properties") that your Company either presently owns and/or formerly owned within the Site from the date your Company, or any related company had an ownership interest. (*See* Definitions section for terms.)

As indicated above, VGSI does not now, nor did it previously, own any property within the Site. From 1960 to 1993, VGSI's predecessor in interest, GIC, operated the GIC Hicksville Facility located at 600 West John Street, Hicksville, Long Island, New York. The property on which the GIC Hicksville Facility is located was originally owned by Jerry Spiegel and Jacob Gellman ("Spiegel/Gellman") who also operated as Edgecombe Construction Corp. On December 17, 1959, Spiegel/Gellman entered into a twenty-one year lease containing various purchase options with General Transistor Corp. The lease called for the construction of a 50,000 square foot manufacturing building to be completed by September 1960. **(Tab 1)** It is believed that as of approximately 1960, the Town of Oyster Bay referred to the property as Section 11, Block 499, Lots 77-78. **(Tab 1)**

In August 1960, General Transistor Corp. was merged with and into GIC. Thereafter, in August 1967 GIC took title of the property from Edgecombe Construction Corp. In 1993, all operations at the GIC Hicksville Facility ceased. In 1997, GIC changed its name to GSI, and the GIC Hicksville Facility was sold to First Industrial, L.P. Thereafter, and upon information and belief, the property was sold to 600 West John, LLC. Upon information and belief, GIC may have also rented a portion of the property known as 530 West John Street from 1988 to approximately 1991.

3. For each Property identified in response to question 2 in which your Company has and/or had an ownership interest currently or in the past, please identify:

a. The date your Company acquired an ownership interest. An ownership interest includes, but is not limited to, fee owner, lessor or lessee, licensee and/or operator;

To the extent that USEPA is seeking information commencing with the Spiegel/Gellman lease for the 600 West John Street property (referenced above in 2), the response is December 17, 1959. (**Tab 1**) Upon information and belief, GIC may have also rented a portion of the property known as 530 West John Street from 1988 to approximately 1991.

b. The name and address of all other current and/or previous owners;

See Response to 2, above.

c. All individuals or entities that have leased, subleased or otherwise operated at each Property at any time currently or in the past, and identify the dates (month and year) that each such individual or entity began and ended its leasehold interest or its operations;

Based on a review of the documentary record, General Transistor Corp., and GIC rented the Property from 1959 through approximately 1967.

In addition, part of the Hicksville Facility may have been leased to Litton Systems, Inc. from August 1991 to December 1993. (**Tab 8**)

Upon information and belief, GIC may have also rented a portion of the property known as 530 West John Street from 1988 to approximately 1991.

d. Any portion of any Property which was transferred or sold, and the block and lot number, the date of the transfer or sale, the sale price and the entity that acquired the Property;

See Response to 2, above, as well as documents referenced in **Tab 4** and **Tab 5.**

e. The relationship, if any, between your Company and each of the individuals and/or other entities identified as having leased or operated at each Property;

Except as described above in Responses 1 and 2, VGSI has no relation to First Industrial, LP, 600 West John, LLC, Litton Systems, Inc., Jerry Spiegel, Jacob Gellman, or Edgecombe Construction Corp.

f. Your Company's involvement in all operations conducted by each lessee and/or other individual or entity identified in response to question 3c., above; and

Other than as described herein for GIC, none currently known.

g. For each Property, provide all documents relevant to your responses to questions 3a.-3f., above, and provide copies, including, but not limited to, copies of surveys, title search documents, deeds, rent rolls, leases and correspondence.

See documents included herewith. **(Tabs 1, 4 and 8)**

4. Provide copies of all maps, building plans, floor plans and/or drawings for each Property identified in response to question 2., above. Your response to this question should include, but not be limited to, providing existing and former plumbing, drainage system plans, waste-water discharge areas, tunnel sumps, dry wells, septic systems and waste lagoons in proximity to or within all structures on each Property.

See documents included herewith. **(Tab 9).**

5. For each Property identified in question 2., above, describe in detail, the manufacturing processes and/or other operations that the Company conducted at each Property, and the years of operations. If those operations changed through the years, describe the nature of all changes, and state the year of each change. If detailed information about the Company's operations is not available, provide, at a minimum, a general description of the nature the business operations at each

Property, the years of operation, the type of work conducted, and the number of employees for all the operations.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding the manufacturing processes and/or other operations that were conducted at the GIC Hicksville Facility. Subject to the foregoing, VGSI states that based upon its review of the documentary record, GIC's activities at the GIC Hicksville Facility appear to have begun in 1960 through sometime in 1993, and appear to have been primarily focused on the production of microcircuits. **(Tab 10)**[1]

A review of the documentary record further indicates that operations were initially conducted in a one-story building constructed by Edgecombe Construction in 1960. **(Tab 1)** In 1967, a two-story building was added to the eastern edge of the original building, and in 1968 a one-story building was added to the north side of the 1967 addition. **(Tab 11)** Along with these additions, a two-story parking garage was present on the northwest corner of the site, but was later removed in approximately 1985. **(Tab 12)** A wastewater lagoon was present onsite from approximately 1960 to 1984. **(Tab 11)**

Generally, the foundation of a microcircuit is the raw silicon wafer. In order to give a silicon wafer its desired properties (electrical resistance, durability, etc.) various oxides, i.e., boron, gold, ceramic, etc. are deposited onto the wafers. This is

[1] During operations, a proprietary blend of otherwise available chemical compounds was used in the production process. The blend of these chemical compounds, and more important, the ratios in which they have been identified in the various reports set forth in Tab 10, is proprietary information. Disclosure of this proprietary information could result in a financial harm. As such, the documents identified in Tab 10 are marked "Confidential." VGSI makes reference to Tab 10 in subsequent responses without waiving or intending to waive, but on the contrary, preserving and intending to preserve, its right to claim Confidentiality and an exemption from production pursuant to the Freedom of Information Act.

referred to as "oxide deposition." During the relevant period, oxide deposition was generally accomplished through a vacuum or vapor process and then stabilized by baking the silicon wafer in a furnace. It was also not uncommon for wafers to undergo multiple stages of oxide deposition.

In between oxide depositions, a wafer would typically undergo a "photo-mask" procedure, which is intended to create a pattern of electrical circuitry in the oxide layers. The term photo-mask refers to the process where a photographic image is put on a plate and then reduced down to a size compatible with the wafer. Through a process of acid etching and solvent cleaning, a pattern corresponding to the photographic image was created on the wafer. This oxide deposition/photo-mask procedure created what are known as "gates" on the silicon wafer, which made it possible to add metallic substances to the wafer to create properties of capacitance, inductance, etc. The addition of metals (i.e., "metalizing") to the wafer grid was accomplished in much the same way as oxide deposition.

The finished silicon wafers were then assembled into "package headers", a strip which held the chips and allowed for electrical fit into the "package." The "packages", which encased the finished circuitry, were designed to prevent damage from moisture, dust, etc. The "package" also made connection of the finished circuitry to other circuits possible. **(Tab 10)**

In terms of employees, the documentary record suggests that as many as 780 employees may have been employed during certain years. **(Tab 13)** However, VGSI currently only has names and last known addresses of approximately 320 employees that worked at the GIC Hicksville Facility. At this time, VGSI does not

know if the former employees for whom it has information all worked at the same time, or if they worked at different periods over the life of the facility.

VGSI has not yet had an opportunity to discover what activities, if any, were conducted at 530 West John Street from 1988 to approximately 1991.

6. With respect to industrial wastes at the Property, list all industrial wastes that were used, stored, generated, handled or received at the Property. Your response to this question should include, but not be limited to, use, storage, generation and/or handling of trichloroethylene ("TCE"), tetrachloroethylene ("PCE"), 1,1,1-trichloroethane ("1,1,1-TCA") and other chlorinated or non-chlorinated solvents, as well as those substances listed on the chart below. Be as specific as possible in identifying each chemical, and provide, among other things, the chemical name, brand name and chemical content.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding industrial wastes at the GIC Hicksville Facility, and, in particular, lacks any first-hand knowledge of how said wastes were used, stored, generated, handled or received.

However, a review of the documentary record indicates that two industrial waste streams comprised generally of acids and solvents appear to have been "stored, generated and handled" from the manufacturing processes at the GIC Hicksville Facility, along with non-contact cooling water. We have found no documents suggesting that industrial wastes were either "used" or "received" at the site.

The documentary record suggests that virgin compounds used during the late 1960's and early 1970's included, but were not limited to, potassium ferro-cyanide, ammonium fluoride, J100 solvent, which consisted of 1,2-Dichlorobenzene

("DCB"), phenolics, sulphonic acid, and PCE; photo-resist chemicals potassium dichromate and chromium trioxide and photo resist solvents, which consisted of ethylbenzene and xylene; and TCE was used as a degreasing agent to clean wafers. In addition, it is believed that for a period of time, hydrofluoric, nitric, chromic and sulfuric acids were used in the manufacturing processes. **(Tab 10)**

A Chemtec report prepared for GIC suggests that in 1979 various commercially available etching, oxide and photo-resist products were used, such as, FC 40, FC-93, FC-78, FC423, Chrome Etch, Cobehn Solvent, AZ Developer, AZ 303, AZ311, AZ1350B, AZ 111, AZ 1350, HR 200, HPR 204, J-100 Stripper, Rapid Fixer, D-8 developer, Microneg Developer, Microneg Rinse, Microneg Resist, Stripper ATS and KTI-R 60CST. In addition, non-proprietary chemicals were also used, such as acetic acid, aluminum acetate, acetone, ammonium fluoride, ammonium hydroxide, boron tribromide, dimethylformamide, hexamethylsilizane, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, isopropanol, methanol, nitric acid, phosphoric acid, phosphorous oxychloride, potassium dichromate, sodium bisulfate, sulfuric acid, trichloroethylene (TCE), and xylene. The documentary record further suggests that the use of TCE was suspended in approximately 1981 in place of 1,1,1-TCA. **(Tab 10)**

VGSI is producing herewith copies of MSDSs that were part of GIC's operating documents, which date as far back as 1979 and continue through 1992. With the exception of the information set forth in the Chemtec report, it is unknown if a chemical reflected on a specific MSDS was used, stored, generated, handled or received at the Hicksville Facility, or if the MSDS was obtained for informational

purposes, or for research on a small scale in the onsite process laboratory. Alternatively, assuming a specific chemical was used, stored, generated, handled or received, it is currently unknown as to each chemical the quantity of chemical used, stored, handled or received, or for how many months or years a specific chemical was used, stored, handled or received at the site. (**Tab 14**)

7. State when each industrial waste identified in your response to question 6., above, was used, stored, generated, handled or received, and state the volume of each industrial waste used, stored, generated and/or handled on an annual basis. If you do not have exact volumes, estimate and explain the basis for your estimate.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding industrial wastes at the GIC Hicksville Facility, and, in particular, lacks any first-hand knowledge of how said wastes were used, stored, generated, handled or received.

Notwithstanding, a review of the documentary record indicates that GIC submitted annual hazardous waste reports to both NYSDEC and USEPA from approximately 1983 to 1993. Copies of such reports currently available to VGSI are being produced herewith. (**Tab 15**) In addition, though VGSI does not have sufficient information to estimate the volume of industrial waste stored, generated or handled, prior to 1983, the Chemtec report referenced in response to Question 6 did set forth an estimate of the volume of raw proprietary products and chemicals used in GIC's manufacturing operations on an annual basis for 1979. That report, for example, suggests that approximately 1420 gallons of TCE and 2200 gallons of J-100 solvent were used in GIC's manufacturing operations in 1979. (**Tab 10**)

Similarly, in 1970 GIC retained Holzmacher, McClendon & Murrell, P.C. ("H2M") to conduct an evaluation of the industrial wastewater treatment and disposal systems at the GIC Hicksville Facility, and to make recommendations on upgrading collection, treatment and disposal methods. H2M made certain assumptions and drew conclusions about the industrial waste streams stored, generated, or handled as a result of GIC's operations as of 1970. **(Tab 10)**

8. Describe the activity or activities in which each industrial waste identified in your response to question 6., above, was used, stored, handled or received.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding industrial wastes at the GIC Hicksville Facility, and, in particular, lacks any first-hand knowledge of how said wastes were used, stored, generated, handled or received.

Notwithstanding, a review of the documentary record indicates that the three manufacturing processes described in response to Question 5 above (oxide deposition, photo-mask, and metalizing), would have produced the majority of the waste streams associated with the GIC Hicksville facility. Acids and solvents were required to etch and clean wafers. Cooling water was required in the furnaces and metallizers, and the photo-mask process required development chemicals and rinse water.

Generally, acid wastes were collected in above ground holding tanks and treated before being discharged to the onsite wastewater lagoon. In 1984 the lagoon was closed and treated wastewater was discharged to the Nassau County publicly owned treatment works. **(Tabs 10 and 22)**

Similarly, waste solvents were initially collected and stored onsite in 55 gallon drums for off-site disposal. **(Tab 16)** Later waste solvents were stored in two 275-gallon above ground storage tanks located along the west side of the original one-story building. During or immediately after the construction of the addition in 1968, a 2000-gallon underground storage tank ("UST") was installed for collection of waste solvents (referred to in remediation documents as Area A). Later, an additional 1000-gallon UST for the collection of waste solvents was also installed in place of the two 275 gallon tanks (referred to in remediation documents as Area B). Collected waste solvents were hauled offsite for disposal. **(Tabs 10, 11 and 16)**

In 1980, the 2000 gallon Area A underground waste solvent UST was discovered to be leaking and was removed. The Area B 1000-gallon UST was also removed. In 1980, after the Area A tank was removed, a 5000 gallon above ground storage tank was installed at the site to receive waste solvents. **(Tab 11)**

9. For each substance listed in the chart below, state whether it was detected in sampling performed at the Property at any time. If your answer is Yes, on a separate sheet, provide the identity of the study, the investigator, the date of the study, specifically where on the Property and by whom the sampling was performed.

Substance	Yes or No
Trichloroethylene (TCE)	Yes
Tetrachlorethylene (PCE)	Yes
Cis-1,2-dichloroethylene	Yes
1,1-dichloroethylene	Yes
1,1,1-trichloroethane (1,1,1-TCA)	Yes
Chlorobenzene	Yes
Benzene	Yes

1,2-dichlorobenzene	Yes
Methyl ethyl ketone (2-butanone)	Yes
Xylenes, total	Yes
Chromium	Yes
Trivalent Chromium	TBD
Hexavalent Chromium	Yes
Vinyl Chloride	Yes
Arsenic	TBD
Barium	TBD
Cadmium	TBD
Copper	Yes
Iron	TBD
Lead	Yes
Manganese	TBD
Mercury	TBD
Nickel	TBD
Sodium Chloride	TBD
Calcium Chloride	TBD
Zinc	TBD

As described previously, in 1980 the 2000 gallon Area A waste solvent UST was discovered to be leaking and was removed. The Area B 1000-gallon UST was also removed. It also was discovered to be leaking. The elements most commonly detected in and around the two leaking waste solvent USTs have been chlorinated hydrocarbons, trichloroethene ("TCE"), toluene, ethyl benzene, total xylenes and 1,2 dichlorobenzene.

Since 1980, there have been more than 3,500 unique soil and groundwater samples collected as part of the investigation and/or remediation of the releases from the GIC Hicksville Facility by various environmental consultants, including

Betz Converse & Murdoch ("BCM"), Stearns & Wheler ("S&W") and WSP.[2] Given the number of unique samples, coupled with the limited time frame given by USEPA to respond to the information request, it was not possible to provide the "identity of the study, the investigator, the date of the study, specifically where on the Property and by whom the sampling was performed" for each substance listed in the chart. However, all reports prepared by BCM, S&W, and WSP, which VGSI has in its possession, custody or control, are being produced herewith. **(Tabs 17, 18 and 21)** Much of the GIC Hicksville Facility analytical data was thoroughly digested in USEPA's Supplemental Remedial Investigation Technical Memorandum for the New Cassel/Hicksville Groundwater Contamination Site.

In addition, because the investigation of the releases at the GIC Hicksville Facility has largely been focused on VOC contamination, affirmative responses indicating detections for inorganic data were taken from the previously referenced Chemtec report and available discharge monitoring reports. Upon information and belief, Chemtec was retained to assist GIC in complying with its SPDES permit obligations. A review of the documentary record also indicates that GIC submitted discharge-monitoring reports to the Nassau County Department of Health. Copies of such reports currently available to VGSI are being produced herewith. **(Tab 19)**

Please note that certain substances referenced on the chart provided by USEPA, such as mercury, have a "TBD" notation, which means, "to be determined."

[2] Pursuant to FOIA, specifically exemption 9, certain information related to the development of groundwater wells and the data generated therefrom is "Confidential" and is exempt from production pursuant to the express provisions of FOIA and the case law interpreting the statute. As such, certain documents identified in Tabs 17, 18 and 21 are marked "Confidential." VGSI makes reference to these Tabs in various responses herein without waiving or intending to waive, but on the contrary, preserving and intending to preserve, its right to claim Confidentiality and an exemption from production pursuant to FOIA.

This indicates that the review conducted to date has **not** found a positive sampling result and that the data that has been reviewed, such as discharge monitoring reports, either report a negative or the sample was not analyzed for that particular substance. However, given the time constraints faced by VGSI in responding to this information request, coupled with the fact that information is still being gathered pursuant to VGSI's ongoing obligation, VGSI felt that a "TBD" designation was more accurate than a "NO" response.

10. Describe in detail how and where the industrial wastes identified in response to question 6., above were disposed. For each disposal location and method, state the nature and quantity of the material disposed of on an annual basis. For those time periods when a precise quantity is not available, provide an estimate and the basis for the estimate. Provide manifests for disposal, if available.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding how industrial wastes were disposed of at the GIC Hicksville Facility.

Notwithstanding, a review of the documentary record indicates that there were four (4) separate industrial waste collection systems in the manufacturing plant. There were two (2) systems commonly referred to as the acid waste water collection systems, which were comprised of two-inch (2") through eight-inch (8") PVC drainage pipe. The other two (2) systems were commonly referred to as the solvent collection systems, and, for the most part, were composed of one and one-half inch (1-1/2") through four-inch (4") galvanized steel waste pipes.

The waste collection systems appear to have been divided based on geography, i.e., west wing (original one story building built in 1960) and east wing

(the two story addition built in 1967) so that each wing had an acid waste and solvent waste collection system.

The acid waste collection system in the west wing was designed to allow acid wastes to flow into a concrete wet well where the acid wastes were then pumped into treatment tanks within the plant's industrial waste water treatment system. In the east wing, the system was designed to allow acid wastes to flow into a main six-inch (6") drain which terminated at a dual centrifugal pump, pumping station; from there acid wastes were pumped into the waste water treatment tanks. The precipitated sludge from the wet well and treatment tanks was disposed of offsite. Both acid waste collection systems possessed a bypass that would allow, under emergency conditions approved by the Nassau County Department of Health, the acid waste streams to be discharged without treatment into the onsite wastewater lagoon. Apparently, after the expansion in 1967 and 1968, the acid waste streams overwhelmed the waste water treatment system and were discharged directly into the lagoon without treatment for a period of time. (**Tab 10**)

The two waste solvent systems were, for the most part, similar in construction. The smallest of the two systems collected spent solvents and solvent rinse waters from the west wing of the plant and drained them to an exterior sump located on the west side of the west wing of the plant. Here the wastes were automatically pumped, initially, into 55 gallon drums, which system was replaced with two 275 gallon, above ground steel storage tanks, which systems was replaced with a 1,000 gallon UST.

The solvent collection system in the east wing drained to a factory fabricated, dual centrifugal pump, pumping station where the spent solvents were pumped through a one and one-half inch (1-1/2") galvanized steel drain to a 2,000 gallon, UST located just west of the main boiler room.[3] After 1980, the wastes drained to a 5,000 gallon above ground storage tank. Spent solvents were disposed of offsite.

As to the nature and quantity of the acid and solvent waste streams disposed of on an annual basis, VGSI lacks first-hand knowledge to respond to this request. However, as indicated previously, H2M made certain assumptions and drew conclusions about the industrial waste streams stored, generated, or handled as a result of GIC's operations in 1970. **(Tab 10)** In addition, Chemtec estimated the volume of raw proprietary products and chemicals used in GIC's manufacturing operations on an annual basis for 1979, and GIC submitted annual hazardous waste reports to both NYSDEC and USEPA from approximately 1983 to 1993. Copies of such reports currently available to VGSI are being produced herewith, **(Tab 15)** as are copies of hazardous waste manifests currently available to VGSI. **(Tab 20)**

11. Describe where drummed wastes and/or contaminated soil were staged on each Property. If drums and/or contaminated soil were buried on each Property, identify where they were buried. If buried drums and/or contaminated soil were excavated and removed, identify the locations of the drum and/or soil removal. Provide an inventory of the number of drums, the volume of the drums and/or soil, the contents of the drums and/or soil, and the disposal site for such drums and soil. For drums disposed of off the Property, provide manifests for their disposal.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand

[3] The 1970 H2M report refers to the east wing solvent tank as a 3,000 gallon UST; however, the subsequent remediation reports state that the UST was 2,000 gallons in size.

knowledge regarding drummed wastes and/or contaminated soil at the GIC Hicksville Facility.

Notwithstanding, a review of the documentary record, in particular the remedial investigation documents prepared by BCM and S&W, suggests that drummed wastes were not buried or otherwise disposed of at the GIC Hicksville Facility. However, the available documentary record does suggest that drummed wastes were stored at the GIC Hicksville Facility in the early part of the 1960's for various waste streams, including spent solvents, spent cyanide, and heavy metals, all of which were indicated to have been disposed of offsite. **(Tab 16)**

12. State the number and the locations of the underground storage tanks, ("UST") at the Property from the 1950s to the present. For each UST, state whether it was used for storage of product, storage or treatment of hazardous waste and/or industrial waste. State whether the USTs were in compliance with the hazardous waste regulations set forth in 40 C.F.R. Part 264/265. If any USTs contained petroleum product, state whether they were in compliance with the regulations at 40 C.F.R. Part 280.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding underground storage tanks at the GIC Hicksville Facility, and, in particular, lacks any first-hand knowledge of whether any such UST's were "used for storage of product, storage or treatment of hazardous waste and/or industrial waste." VGSI certainly is unaware of whether there are any current USTs given that VGSI does not currently own, has not ever owned, and has not conducted any operations, at the GIC Hicksville Facility.

However, review of the documentary record indicates that in addition to the storage tanks previously described (e.g., the Area A and Area B UST's, two 275 gallon above ground waste solvent tanks in Area B, and the 5000 gallon above ground waste solvent tank), GIC also utilized a 10,000-gallon fuel oil UST and a 2,000-gallon diesel UST. In addition, there appear to have been several above ground storage tanks ("ASTs") for storage of product, including a 10,000-gallon AST for Nitrogen, a 3,000-gallon AST for Nitrogen, a 5,000-gallon AST for oxygen, a 2,000-gallon AST for Hydrogen, a 1,500-gallon AST for Sulfonic Acid, a 2,000-gallon AST for caustic, and a 10,000-gallon AST for deionized water.

Other than the 5000 gallon waste solvent AST, for which the documentary record suggests GIC applied for and received a permit pursuant to 40 CFR Part 264/265, and the applicable State of New York regulations, VGSI currently lacks any information regarding compliance history for the other above ground and underground storage tanks that were located at the GIC Hicksville Facility.

13. Provide a summary listing of environmental assessments or studies, investigations, removal actions, remedial activities, or any other environmental work conducted by your Company or by any other party on your Company's behalf relating to industrial wastes released at or from the Property and/or the Site. If any copies of the records requested in this question are available electronically, kindly submit your answer to this question on a hard drive or a disk.

In December 1980, a leak in the Area A 2000-gallon UST was discovered. Immediately upon discovery of the leak, the tank was removed. The Area B 1000-gallon UST was removed in approximately 1981 or 1982. An environmental investigation found that VOCs had been released to the soil and groundwater at the GIC Hicksville Facility from the two USTs. The compounds most commonly detected

were chlorinated hydrocarbons, TCE, PCE, toluene, ethyl benzene, total xylenes and 1,2 DCB. Initially, GIC installed an onsite pump-and-treat system to arrest impacted groundwater. The treated groundwater from the pump-and-treat system was discharged into the onsite wastewater lagoon. However, the pump-and-treat system was deemed ineffective and was shut down. In September 1985, the Nassau County Department of Health referred the matter to NYSDEC.

NYSDEC and GIC entered into an Administrative Consent Order ("ACO") dated January 16, 1990. In January 1992, a Phase I Remedial Investigation Report was submitted to the NYSDEC. VGSI continues to comply with the 1990 ACO.

The remedial investigation identified three potential onsite sources of contamination in soil:

Area A: 2,000-gallon waste solvent tank;

Area B: 1,000-gallon waste solvent tank west of the building; and

Area C: Tunnel sump under the building.

A soil vapor extraction ("SVE") system was installed as in Interim Remedial Measure ("IRM") to address onsite soil contamination at Areas A, B, and C in 1994. In March 1997, NYSDEC issued a Record of Decision ("ROD") for cleanup of onsite soils, which was referred to as operable unit one ("OU-1"). The OU-1 ROD required SVE for the ongoing treatment of onsite soils contaminated with VOCs. As a result of the 1997 OU-1 ROD, the existing SVE system was upgraded to better meet NYSDEC's soil cleanup goals. At its full capacity, the SVE system included nine SVE well pairs that covered more than 30,000 sq feet of the site, including portions underneath the building. SVE closure testing was completed in 2001 and 2002, resulting in the

permanent closure of Areas B and C with the approval of NYSDEC in 2003. The SVE continued to operate in Area A until 2012. Because recent data suggested that soil cleanup objectives have been achieved in Area A, the SVE system has been turned off with the approval of NYSDEC and pending a vapor intrusion investigation scheduled for fall/winter 2013.

In 1997, GIC focused efforts on identifying sources of contamination to groundwater, and submitted to NYSDEC the Phase III remedial investigation for groundwater, which was referred to as Operable Unit 2 (OU-2). Additional offsite groundwater investigation downgradient (i.e., south) from the GIC site resulted in a 2001 Phase IV remedial investigation report.

In 2002, ESC Engineering of New York (now known as WSP) was retained to assist with a Phase V investigation and, eventually, to develop an IRM and remedy for OU-2. In February 2003, the Phase V offsite groundwater investigation report was submitted to NYSDEC. During this fifth phase of investigation, it was confirmed that only Areas A and B (and not Area C) had contributed to the offsite groundwater plume attributable to the former GIC site.

Based on the extensive data developed during the five phases of offsite groundwater investigations, an understanding of the VOC plume attributable to the former GIC site was developed in sufficient detail to allow an offsite groundwater IRM to be designed and installed. A recirculation-well groundwater treatment system was installed in 2003 and 2004 approximately 1900 feet south of the former GIC site and upgradeint of the Hicksville Plant 5 drinking water wells. The groundwater IRM operated until May 2009 when it was shut down.

In 2007, WSP mobilized to conduct the sixth and final phase of the offsite groundwater investigation, i.e., the Phase VI remedial investigation. Fieldwork commenced in April 2007 and carried through 2009. The Phase VI RI Report was submitted to NYSDEC on May 21, 2010. Semi-annual groundwater monitoring continues.

14. Describe in detail any knowledge your Company has about intentional or unintentional disposal of industrial wastes at each Property identified in response to question 2. above. Your response should include instances in which industrial wastes were spilled or otherwise disposed into lagoons, or into or onto the ground from septic systems, pipes, drains, drums, tanks, or by any other means. Provide copies of all documents relevant to your response.

The GIC Hicksville Facility ceased operations in 1993; nearly a decade prior to the acquisition of GSI's common stock. VGSI, therefore, lacks any first-hand knowledge regarding intentional or unintentional disposal of industrial wastes at the GIC Hicksville Facility.

Subject to the foregoing, VGSI states that based upon its review of the documentary record, in particular the remedial investigation documents prepared by BCM and S&W, in December 1980 a leak in the Area A 2000-gallon UST was discovered. Sometime thereafter, the Area B 1000-gallon UST was also found to be leaking. VOCs were released to the soil and groundwater at the former GIC Hicksville Facility from both the Area A and Area B USTs.

With respect to the wastewater lagoon, it was located in the northern portion of the Hicksville Facility. The documentary record suggests that there were a series of communications between the Nassau County Department of Health ("NCDH") and GIC from August 1960 through June 1965 related to GIC's compliance with

prevailing groundwater standards and the construction of a treatment works. **(Tab 23)** The treatment works was constructed in June 1964 and approved in 1965. **(Tabs 10 and 23)** The approved treatment works was designed to reduce fluoride concentrations in the wastewater and to keep the pH between 6.5 and 8.5. Thereafter, it was upgraded to also remove hexavalent chromium from sludge bottoms that were disposed of offsite. The hexavalent chromium was present in two photo-masking compounds – potassium dichromate and chromium trioxide. **(Tab 10)**

In 1968, GIC began expansion of the production facility, and sought to upgrade the existing treatment system as it was insufficient for the increased flow. As a result, in 1970 GIC retained Holzmacher, McClendon & Murrell, P.C. ("H2M") to conduct an evaluation of the industrial wastewater treatment and disposal systems, and to make recommendations on upgrading collection, treatment and disposal methods at the site. **(Tab 10)**

H2M estimated that from 1960 to approximately 1968 estimated daily water usage for sanitary and industrial uses, including deionized water and non-contact cooling water, was as high as 80,000 gallons per day. In 1968, after an expansion of the facility, H2M suggested that water usage increased to as much as 335,000 gallons per day, with the largest share used for non-contact cooling water. From 1968 to 1972, approximately 83% of the water each day was used for non-contact cooling water by GIC. H2M indicated that hazardous substances were discharged neither to the sanitary septic system nor to the storm water catch basins.

From its inception, the wastewater lagoon was intended to receive acid-

containing waste water, which contributed to increased fluorides into the waste stream and negatively impacted pH. Spent solvents were not intentionally disposed of into the lagoon at any time during the operational history of GIC. **(Tab 10)**

An SPDES permit was issued to GIC in 1975. From approximately 1977 to 1982, GIC's wastewater was routinely monitored by the NCDH for pH, nitrogen, chloride, sulfate, fluoride, chromium, lead, aluminum, TCE, phenols, copper, 1,1,1-trichloroethane, methylene chloride and pH. **(Tab 19)**

In 1984, GIC retained Fred C. Hart Associates, Inc. ("FCH") to close the lagoon in accordance with NYSDEC standards and requirements. In its closure report, FCH estimated that from 1972 to 1984, approximately 100,000 to 200,000 gallons of water per day were discharged to the lagoon, and that while GIC met its discharge requirements for metals and most volatiles it did "consistently" exceed standards for fluoride, and did "frequently" exceed the limits for phenols, xylene, methylene chloride and pH. **(Tab 22)**

15. Identify all leaks, spills, or releases of any kind of any industrial wastes, including, but not limited to, TCE and PCE or other chlorinated or non-chlorinated solvents or wastes containing such solvents) into the environment that have occurred, or may have occurred, at or from any Property, including any leaks or releases from drums and other containers. Provide copies of all documents relevant to your response.

See responses to 9, 10, 13, and 14 and the documents referred to therein.

16. Explain whether any repairs or construction were implemented to address any leaks, spills, releases or threats of releases of any kind, the nature of the work and the dates of any such work.

See responses to 13 and 14 and the documents referred to therein.

17. Provide copies of all insurance policies held and indemnification agreements entered into by the Company which may potentially indemnify the Company against

any liability which it may be found to have under CERCLA for releases and threatened releases of hazardous substances at and from each Property. In response to this request, please provide not only those insurance policies and agreements which currently are in effect, but also those that were in effect during any period of time that the Company conducted operations at, or held a property interest in each Property.

VGSI is not aware of insurance policies or indemnification agreements that would be responsive to this request.

18. State the names, telephone numbers and present or last known addresses of all individuals whom you have reason to believe may have knowledge, information or documents regarding the use and storage, generation, disposal of or handling of industrial wastes at the Site, the transportation of such materials to the Site, or the identity of any companies who material was treated or disposed of at the Site.

While VGSI lacks any first-hand knowledge about the operational history of GIC's Hicksville Facility, the documentary record suggests that wastes were not received from offsite sources for processing, treatment or disposal onsite. The names and last known addresses of former GIC employees who may have knowledge, information or documents regarding the use and storage, generation, disposal of or handling of industrial wastes at the Site, include the following individuals. VGSI does not know if the addresses are current or if the individuals identified are living or deceased.

Harry Pomrenke (believed to be deceased)
Corporate Facilities Managaer
173 Birchwood Lane
Galena, MD 21635

Allan Diamanti
Operations Manager
257 River Rd.
Smithtown, NY 11787

Thomas Lancia
Director of Operations

33 Derbyshire Dr.
Cranston, RI 02921

Barbara Curtis
Environment, Health & Safety
40 Bridge Four Lane
Pipersville, PA 18947

Charles Gorsch
Manager, Plant Engineering
499 Fawn Trail
Titusville, FL 32780

Mara Sinayuk
Environmental Health & Safety
78 Cedar Drive West
Plainview, NY 11803

Sam Karch (believed to be deceased)
Director, Corporate Facilities
9921 Carmel Mountain Road
San Diego, CA 92129

Rob Maciel
Environment, Health & Safety
General Electric
Rochester, NY

Ed Sack
Plant Manager
57 Margo Lane
Huntington, NY 11743

Herman Fialkov
Owner of General Transistor
1 Kennsington Gate
Great Neck, NY 11021

19. If you have information or documents which may help EPA identify other companies that conducted operations, owned property, or were responsible for the handling, use, storage, treatment or disposal of industrial wastes that potentially contributed to chlorinated solvent contamination of the Site, please provide that information and those documents, and identify the source(s) of your information.

Given the limited timeframe provided by USEPA to respond to this information request, VGSI focused its efforts on reviewing available GIC operating documents so that responses could be drafted and timely submitted to USEPA. However, VGSI recognizes the importance of responding to this question, as it may assist USEPA in identifying the parties that are responsible for the contamination to be addressed by USEPA's proposed OU-1. Therefore, VGSI is in the process of reviewing documents that were obtained through discovery in the litigation captioned *Next Millenium Realty, LLC v. AdChem Corp.*, et al., (2:03-cv-5985), and will supplement this response as appropriate.

20. Please state the name, title and address of each individual who assisted or was consulted in the preparation of your response to this Request for Information. In addition, state whether each person has personal knowledge of the answers provided.

David Tomlinson, Director, Senior Vice President Finance, and Assistant Secretary of VGSI, assisted in the preparation of this response. Other than information related to VGSI's corporate form and VGSI's corporate parent, Mr. Tomlinson possesses no personal knowledge of the answers set forth herein.

James Sobieraj, WSP USA, assisted in the preparation of this response. Other than information derived from the work conducted by ESC Engineering of New York, PC and WSP, Mr. Sobieraj has no personal knowledge of the answers set forth herein.

In-house counsel for VGSI and out-side counsel for VGSI, Laddey, Clark & Ryan, LLP, were consulted in the preparation of the responses to this information request.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of Pennsylvania :
:
County of Chester :

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information regarding the New Cassel/Hicksville Site) and have directed or supervised the collection of all documents submitted herewith, and that I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that I am under a continuing legal obligation to supplement my response to EPA's Request for Information if any additional information relevant to the matters addressed in EPA's Request for Information or my response thereto should become known or available to me.

David L. Tomlinson
NAME (print or type)

Director, Sr. Vice President Finance
& Assistant Secretary
TITLE

SIGNATURE

Sworn to before me this
26 Day of September, 2013

Judith Clements
Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Judith Clements, Notary Public
Malvern Boro, Chester County
My Commission Expires Oct. 7, 2015
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES